

Notes from PowerPoint slides

Airlines: CDC's Public Health Partner

Guidance for Airlines on Reporting Onboard Deaths or Illnesses to CDC

Slide 2

Airline crew generally includes the captain, 1st class officers, cabin crew, and gate agents. They all play different roles in recognizing onboard deaths or illnesses and reporting them to the CDC. The CDC Quarantine Stations are directly involved in these responses.

Slide 4

The U.S. Code of Federal Regulations [42 CFR 70.4 and 71.21(b)] contains requirements for reporting death and illness on international flights arriving to the United States and flights between states. Conditions that require reporting are defined in the federal regulations for international travel, but not in the regulations for interstate travel. CDC recommends that airlines apply the same standards for “required” and “requested” reporting to both international flights and interstate flights. Conditions that are required by law to report to CDC or that are requested by CDC to report will be further defined.

CDC largely is an advisory agency, in that guidance is issued on public health matters. However, CDC's Division of Global Migration & Quarantine has regulatory authority that allows it to maintain oversight over specific activities to prevent introduction and spread of communicable diseases into the United States. Regulations for ill travelers (42 Code of Federal Regulations parts 70 and 71) cover interstate and international quarantine. These regulations require the captain of a plane, ship, or other conveyance to report any death on board and certain illnesses that may represent a communicable disease. These are reported to the CDC Quarantine Station (international or interstate) or local public health authority (interstate). Further details on reporting (making a notification) are included later in this document.

NOTE: For arrivals outside the United States, the list of signs and symptoms used to identify a possible contagious disease is somewhat different from those required to be notified to CDC on U.S. arrivals. Refer to ICAO Annex 9–Facilitation, Ch. 8, 8.15 for details.

Slide 5

Reporting is based on signs and symptoms that may be indicative of certain communicable diseases (diseases that easily spread to others) such as the ones listed here. Though you aren't expected to memorize this list, it is important to know that CDC is authorized by Executive Order of the President to issue federal isolation and quarantine orders for the diseases listed on the left column only. We respond most frequently to tuberculosis from the list on the left. The list can be revised by Executive Order if an emerging threat that is not on the list becomes a public health concern. These diseases are referred by CDC as the federally quarantinable communicable diseases.

Individuals arriving at U.S. ports of entry can be legally detained by the CDC if they are reasonably believed to be infected with an illness from this list. These persons would be isolated to prevent exposing others, medically evaluated, and referred for medical care. In addition, persons who may have

been exposed to the ill person can be legally detained in quarantine. These public health measures would be used to avoid exposure to others by keeping them in quarantine for a duration of time (based on the disease) to ensure they are no longer a health risk for the community.

Federal isolation orders are used very rarely, with only a handful of cases over the last few years. Federal quarantine orders have not been issued for several decades.

The diseases listed on the right column are other diseases of public health concern to CDC because they are also easily spread from person to person. We respond most frequently to measles from this list.

Slide 6

Your general internal policies may require you to complete a medical emergency checklist when an illness or death occurs on board during flight or upon arrival.

We ask that you consider the reportable CDC signs and symptoms (later defined) as part of your checklist. As mentioned before, these are signs and symptoms that may be indicative of a communicable disease of public health concern to CDC (see list on page 5).

Infections are spread in different ways. Some are spread by:

- Droplets or aerosols: Coughing, sneezing, or even singing or talking may spread respiratory germs. Depending on what is causing the infection, germs may be spread when another person inhales them from droplets or aerosols expelled into the air by a cough or sneeze. These germs may be inhaled or enter through the surfaces of the eyes, nose, or mouth.
- Contaminated surfaces: Another way of spreading these germs is by touching contaminated surfaces with your hands, then touching your mouth, eyes, or nose, before washing your hands.

Some infections, such as tuberculosis, do not spread easily without close and prolonged contact, while others, such as measles, can be transmitted after brief contact.

Slide 7

As you are aware, communicable disease spread is only a flight away. With the increase in global traffic and trade, people and animals can cross continents in a shorter time than the incubation periods of most diseases. This is why the airlines are an important partner in protecting the U.S. from the introduction of disease.

The RING is a response tool for airline crews to use. It is an acronym that provides four steps to help you with recognizing and reporting (making notification) what are considered “required” and “requested” situations to CDC. These situations are later defined. Typically, these steps would be taken in flight prior to arrival, however there may be times when you may become aware of these situations during pre-boarding or upon arrival.

Recognize: All deaths and certain illnesses (see next slide)

Isolate:

- Separate the ill traveler from others to the extent possible
 - If not possible, minimize exposure to others
- Ask the ill traveler who is coughing or sneezing or has a rash to:
 - cover mouth with a tissue
 - wear a face mask (if tolerated)

Notify:

Pilot can use options below:

- Air Traffic Control (*for aircraft outside of U.S. airspace or for U.S. destination*)
OR
- Airline's point of contact (*optional for U.S. arrivals or interstate flights*)

Give Support

- Follow your airline's procedures for getting medical assistance
- Follow instructions from CDC Quarantine Station

Examples of giving support to the CDC Quarantine Station may include gathering more information about the ill traveler or holding the flight until at the gate (i.e., not releasing the rest of the passengers) until a decision can be made.

Links to electronic quick references are included throughout this document to help you recognize situations in which pilots are required by law to report to the CDC and those that are requested by CDC to report. Steps for follow up are outlined.

Slide 8

Per U.S. federal regulations for U.S. arrivals, report as soon as possible:

- All deaths onboard
- Ill travelers on flights to or within the United States with
 - Fever (warm to the touch, history of feeling feverish, or measured temperature of 100°F/37.8°C or greater) reported to have lasted more than 48 hours
 - Fever of any duration, AND one or more of these conditions:
 - Skin rash
 - Swollen glands (visible)
 - Jaundice (yellowing of skin or eyes)
 - Persistent coughing
 - Persistent vomiting
 - Difficulty breathing
 - Headache with stiff neck
 - Decreased consciousness
 - Unexplained bleeding
 - Persistent diarrhea

The next slide includes a few descriptions for the symptoms listed and a link to a comprehensive list with descriptions on our website.

Note: Refer to ICAO document 444 and Annex 9, Ch. 8, 8.15 of the Chicago Convention for reporting requirements. For arrivals outside of the United States, the list of signs and symptoms used to identify a possible contagious disease is somewhat different from those required to be notified to CDC on U.S. arrivals.

Slide 9

Skin rash means abnormal areas on the skin that may appear as discolored bumps or flat spots or areas, or blisters or bumps containing fluid or pus that are intact or crusted over. "Rash" includes insect bites or parasite lesions. Color, texture, pattern, and location are important when describing a rash. Color: ranges from light-colored to red or pink, purple, or black, but can also be the same color as the person's skin tone. Texture: can be flat, raised, blister-like, or crusted. In some diseases, such as chickenpox,

areas with more than one of these characteristics can be found at the same time. Pattern: can be disconnected (discrete) or run together (confluent). Location: may include one area of the body, such as the face, or more than one area. Fever plus rash may indicate communicable diseases such as chickenpox, measles, or rubella (German measles). The photo on the top shows a child with some fluid-filled bumps on the face due to chickenpox.

Swollen glands means the person has enlargement of the glands (lymph nodes) located in the head, neck (as shown on the center photo, which is a child with swelling of the glands of the jaw due to mumps), axilla (armpit), or groin.

Jaundice means the person has yellowish discoloration of skin and/or whites (sclera) of the eyes (as shown on the photo on the bottom, which is a man with yellowing of the eyes caused by hepatitis A).

Acute (new onset) or chronic jaundice can be a sign of a liver infection, such as hepatitis A.

Click on the link for definitions of symptoms.

<http://www.cdc.gov/quarantine/air/reporting-deaths-illness/definitions-symptoms-reportable-illnesses.html>

Slide 10

In addition to visible signs and symptoms of illness, information that travelers share with you or others, or that you or others observe may also help you recognize ill travelers. Here are some questions that may help you recognize an ill traveler.

Observations

- Passenger who seems unwell
- You notice a passenger going to the restroom many times

Questions

- How are you feeling?
- Do you have a fever now or have you had one recently?
- Have you recently been around anyone who has been sick with similar symptoms?
- What countries have you visited during your trip?

How do you know if a traveler has a fever?

You may take a temperature using the thermometer in your grab and go kit. Also, if he or she does not mention a recent history of feeling feverish, then, you should consider the appearance of a flushed face or chills as possible signs of a fever. You may also consider someone to have a fever if the ill person tells you he or she feels feverish (including if the ill person has taken medication such as Tylenol that would lower their temperature) or has an actual measured temperature $\geq 100^{\circ}\text{F}/37.8^{\circ}\text{C}$.

Consult as needed with CDC Quarantine Station staff to help evaluate ill travelers and to receive further recommendations.

Slide 11

The practical measures for protecting yourselves and others include personal protection, management of an ill traveler, targeted clean-up measures, and post-flight measures. Since whether an illness is contagious is usually not known at the time, any body fluid such as mucus, diarrhea, vomit, or blood must be treated as potentially infectious.

Isolate means generally to:

- Ask the ill traveler who is coughing or sneezing or has fever and a rash to:
 - cover mouth with a tissue
 - wear a face mask (if tolerated)
- Separate the ill traveler from others to the extent possible.

- If not possible, minimize the number of persons directly exposed to the ill traveler.

Additionally, CDC guidelines provide information on general infection control measures, as well as specific measures according to three infection categories: respiratory, gastrointestinal, and blood-borne. Click on link for further guidance.

<http://www.cdc.gov/quarantine/air/managing-sick-travelers/commercial-aircraft/infection-control-cabin-crew.html>

These are a few:

- **Hand hygiene is the single most important infection control measure**
 - Wash hands with soap and water for at least 20 seconds after assisting ill travelers or coming in contact with body fluids or surfaces that may be contaminated.
 - An alcohol-based hand cleaner is an alternative to hand-washing but will not be effective if hands are visibly soiled.
 - Avoid touching your mouth, eyes, and nose with unwashed or gloved hands.
- **Disposable gloves (*gloves do not replace proper hand hygiene*)**
 - Wear impermeable, disposable gloves when: physically tending to an ill traveler or coming in contact with body fluids (such as used tissues, blood, vomit, or diarrhea), potentially contaminated surfaces or lavatories
 - Remove gloves carefully to avoid contaminating yourself or your clothing.
 - Properly dispose of soiled gloves after use into a plastic bag, and do not re-use.
 - Wash your hands with soap and water or with an alcohol-based hand cleaner after removing gloves.
- **Surgical-type face masks worn by an ill person may help reduce the spread of** respiratory germs from coughing, sneezing or talking; however, surgical facemasks are not recommended for use by a person who is not ill.

Slide 12

The pilot can notify CDC using options* below:

- ATC (*for aircraft outside of U.S. airspace or for U.S. destination*).

OR

- Airline's point of contact who will then notify CDC (optional for U.S. arrivals or interstate flights).

*Either of these two options meets federal regulations for reporting to CDC.

The following information is collected by the cabin crew. The pilot can provide this information during the notification:

- Aircraft identification
- Departure airport
- Destination airport
- Estimated time of arrival
- Number of persons on board
- Number of suspected cases(s) on board
- Nature of the public health risk, if known

This information is the same as ICAO document 4444, Procedures for Air Navigation Services – Air Traffic Management, Ch.16, 16.6.

Slide 15

More than 350 million international travelers arrive in the U.S. every year through over 300 Department of Homeland Security-designated air, sea, and land ports of entry. There are 20 quarantine stations strategically located at international airports and land border crossings that cover 85% of arriving international travelers. Each station has a jurisdiction, ultimately covering all ports of entry.

Quarantine station staff cannot achieve their mission to protect U.S. communities from global disease threats without the assistance of travel industry partners such as the airlines.

This map shows the twenty stations and their corresponding jurisdictions as defined in 2007. On this map, the yellow circles indicate the locations of the CDC Quarantine Stations. The colors on the map reflect the jurisdictions of each of the quarantine stations. Take note of the jurisdictions and the quarantine station that covers your port of entry. For example, the Atlanta Quarantine Station has jurisdiction of Tennessee, North Carolina, South Carolina, and Georgia. Houston Quarantine Station has jurisdiction over North and East Texas.

Important to note are the El Paso and San Diego Quarantine Stations. Combined these two stations cover over 2,000 miles of the southern land border. They also collaborate with Mexico to improve the health of migrating populations through public health partnerships, science, and response at the US-Mexico land border.

CDC Quarantine Station staff will communicate with the airline to gather additional information and provide recommendations after a notification is made by the airline.

Slide 17

These messages can be read on the plane **after** a report of an ill traveler has been made to CDC Quarantine Station, and/or if requested by the CDC Quarantine Station staff. If possible, these public health announcements (PHA) should be made before landing or while taxiing to the gate to ensure that passengers remain in their seats once the plane has landed. Read the PHA based on two scenarios.

Two different messages are provided based on CDC evaluation of risk.

SCENARIO 1: Public health assessment suggests no public health risk

Please read the following:

- Please remain seated for an announcement.
- An ill traveler onboard our flight has been evaluated by public health officials.
- They have determined that the illness is NOT a contagious disease.
- No precautions or follow-up from public health officials are necessary.

Thank you very much for your cooperation.

SCENARIO 2: Public health assessment suggests possible public health risk

Please read the following:

- Please remain seated for an announcement.
- An ill traveler onboard our flight has been evaluated by public health officials.
- There is a possible risk that passengers seated near this ill person might have been exposed to a contagious disease.
- As a precaution, passengers seated close to the sick person in a designated zone will remain onboard for a few minutes to get some additional information.

- Other passengers are not considered to be at risk and no precautions or follow-up from public health officials are necessary.

Thank you very much for your cooperation.